

ABSTRACT

A flutter test model is provided that utilizes a novel approach for fixing wing elements to an elastic spar, resulting in reduced airflow disturbance. A test wing has an elastic spar that simulates the elasticity of a wing of an actual airplane, and a plurality of wing elements that simulate the external shape of the wing of the actual airplane. A pair of fore and aft anchor members are fixed to the elastic spar by bolts, the wing element that is formed by stereolithography is fitted around the anchor members from the wing tip side, and the wing element is fastened to the anchor members by bolts that run through the wing element from the wing tip side. A weight, which is a tungsten rod, is housed in a weight support hole formed in the wing element. The anchor members and the bolts are not exposed on the surface of the wing element and the airflow over the surface of the test wing is not disturbed when a flutter test is carried out in a wind tunnel, thereby enhancing the accuracy of the flutter test.